

## CLAIMS

1. A sustained improver of muscular fatigue, which consists of leucine, isoleucine, valine, glutamine and a whey protein component.

2. A sustained improver of muscular fatigue, which comprises, as active ingredients, leucine, isoleucine, valine, glutamine and a whey protein component.

3. The improver according to claim 1 or 2, wherein the whey protein component is whey protein and/or a decomposition product of whey protein.

4. The improver according to claim 3, wherein the whey protein is at least one selected from the group consisting of a whey protein isolate, a whey protein concentrate,  $\beta$ -lactoglobulin, and  $\alpha$ -lactalbumin.

5. The improver according to any one of claims 1 to 4, which comprises leucine in an amount of 10 to 30 parts by weight, isoleucine in an amount of 5 to 15 parts by weight, valine in an amount of 5 to 15 parts by weight, glutamine in an amount of 5 to 15 parts by weight, and the whey protein component in an amount of 75 to 25 weight.

6. The improver according to any one of claims 1 to 5, which comprises leucine in an amount of 20 parts by weight, isoleucine in an amount of 10 parts by weight, valine in an amount of 10 parts by weight, glutamine in an amount of 10 parts by weight, and the whey protein component in an amount of 50 parts by weight.

7. The improver according to claim 6, wherein the whey protein component is a decomposition product of whey protein.

8. A food or drink for sustained improvement of muscular fatigue, which comprises, as an active ingredients, leucine, isoleucine, valine, glutamine and a whey protein component.

9. The food or drink according to claim 8, wherein the whey protein component is whey protein and/or a decomposition product of whey protein.

10. The food or drink according to claim 9, wherein the whey protein is at least one selected from the group consisting of a whey protein isolate, a whey protein concentrate,  $\beta$ -lactoglobulin, and  $\alpha$ -lactalbumin.

11. The food or drink according to any one of claims 8 to 10, which comprises leucine in an amount of 10 to 30 parts by weight, isoleucine in an amount of 5 to 15 parts by weight, valine in an amount of 5 to 15 parts by weight, glutamine in an amount of 5 to 15 parts by weight, and the whey protein component in an amount of 75 to 25 parts by weight.

12. The food or drink according to any one of claims 8 to 11, which comprises leucine in an amount of 20 parts by weight, isoleucine in an amount of 10 parts by weight, valine in an amount of 10 parts by weight, glutamine in an amount of 10 parts by weight, and the whey protein component in an amount of 50 parts by weight.

13. The or drink according to claim 12, wherein the whey protein component is a decomposition product of whey protein.

14. The use of leucine, isoleucine, valine, glutamine and a whey protein component for the manufacture of a sustained improver of muscular fatigue.

15. The use of leucine, isoleucine, valine, glutamine and a whey protein component for the manufacture of food or drink for sustained improvement of muscular fatigue.

16. A method of improving muscular fatigue sustainably, which comprises administering leucine, isoleucine, valine, glutamine and a whey protein component.